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ABSTRACT

This study examined two types of training programs--one in which primary emphasis was placed upon the attainment of subject matter competence and teaching skills and a second in which emphasis was placed upon the development of specific intrapersonal and interpersonal skills as they related to the trainees' acquisition of teaching competence. Attitudes and personality traits of trainees were taken as measure of intra- and inter-personal behavior, while measures from two classroom observation scales and pupil evaluations of their student teachers constituted indices of teaching effectiveness. Analyses yielded 13 trait-treatment interactions in which students who scored below average on basic intra- and inter-personal traits profited most from a personalized approach to training and those who scored above average on these measures profited most from the conventional program. (Author)

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The Effectiveness of Two Models of Teacher Training as a Function of the Personality and Attitudes of the Trainee

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Recent research on teacher behavior (Rosenshine, 1971) can be categorized into three general areas: studies about the intrapersonal behaviors of teachers, i.e., their personalities and attitudes; studies about the interpersonal behaviors of teachers, i.e., their interactive modes with pupils; and studies about the subject-matter competence of teachers, i.e., behaviors related to the content they teach.

A major goal of most teacher training programs is to teach the interpersonal behaviors and subject-matter competencies most frequently needed in the act of teaching and which relate most directly to the affective and cognitive growth of the school child. These training programs strive to achieve this goal through course instruction, classroom observation and student teaching experiences that focus upon the attainment and utilization of subject matter competence. Due to conventional commitment to these ends, specific personality and attitudinal traits of the prospective teacher, while often hoped-for results of these experiences, usually are considered indirect outcomes of or spin-offs from the planned instructional sequence.

The conventional model of teacher training as it is customarily applied at teacher training institutions contains four distinct characteristics: (1) general university course work in the field of education, in the sciences, social sciences and the humanities; (2) content-related methods courses from which the prospective elementary school teacher learns how to teach mathematics, science, social science and language arts and the

prospective secondary school teacher learns how to teach either one or two of the above or a more specialized discipline; (3) a planned sequence of classroom observation wherein the trainee observes and sometimes records teaching behaviors as they occur in actual classroom settings; and (4) student teaching wherein the trainee learns to apply his skills in classroom management and group instruction under the supervision of an inservice teacher.

The conventional model of training is characterized by fixed program goals attained through a fixed instructional sequence. It places initial emphasis upon the accumulation of knowledge about subject-matter content and teaching methods with later emphasis upon the application of knowledge and methods in an ongoing, teaching-learning environment. Training programs that focus upon specific competencies during the training sequence and that require of the trainee minimal levels of attainment for these competencies often are referred to as performance- or competency-based.

Fuller (1969) and Peck (1972) have suggested that the appropriate utilization of content-related behavior may be dependent on both the intrapersonal and interpersonal behavior of the trainee and to the extent that intrapersonal and interpersonal growth is limited, the acquisition of effective content-related behaviors may be more difficult or even unattainable. This perspective suggests that a trainee who lacks self-confidence, for example, will experience difficulty in becoming an effective teacher even through he may be capable of attaining a high level of subject-matter competence. A teacher training program which focuses on intrapersonal and interpersonal behavior as well as subject matter competence employs what will be referred to here as the personalized approach or model. These programs differ from conventional training in that they focus upon the

development of intrapersonal and interpersonal behavior in conjunction with the attainment of subject-matter comp tence.* Examples of the intrapersonal, interpersonal and content-related behaviors that a personalized program might seek to develop are noted in Table 1.

Insert Table 1 about here

The personalized alternative to the conventional model of teacher training is one that may include all of the components and program goals of the conventional or competency-based model but that, in addition, takes into consideration the affective development of the trainee. Rather than leave the affective growth of the trainee as an indirect function of a broader instructional strategy, this model, as a part of the training program, adjusts or alters the instructional sequence to include additional experiences that foster the personality and attitudinal characteristics of the trainee that are thought to be prerequisites to effective teaching. This model assesses the affective development of the trainee, feeds this assessment data back to the trainee in a counseling session and plans professional experiences for the trainee that foster his affective development in ways both he and the teacher educator deem most appropriate.

Consider, for example, a prospective teacher who upon entering a training program is given a battery of instruments designed to measure attitudinal and personality traits related to effective teaching. Moreover, let us suppose that on an anxiety measure the trainee scores two standard deviations above a reference group comprised of all preservice

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*Some teacher training institutions using the personalized model include Brigham Young University, Georgia State University, Kansas State Teachers College, Northern Illinois University, The University of Alabama, University of Colorado, The University of Houston, The University of Texas and Western Kentucky University.

teachers who have thus far entered the program. The procedure employed in the personalized model includes feeding back this information to the trainee in addition to other data confirming whatever strong points he may have, e.g., warmth for children, enthusiasm for the training program and dedication to teaching. The personalized program then plans an instructional sequence based upon the trainee's current level of affective development. In this instance, the personalized program might plan, for example, intermediate experiences that introduce the trainee to teaching in a nonthreatening, less anxiety-evoking setting than might be appropriate for his peers. Videotaped performances without the presence of peers, more frequent or earlier experiences with school children in small groups and consistent consultation with the teacher educator might be in order before the trainee is asked to perform the more routine cognitive sequence of instruction.

General differences in the conventional and personalized models of teacher training may be noted in Figure 1. These, however, are stereotypic versions as some programs espousing either model will differ both in degree and in kind. Which type of training program--conventional or personalized--is more effective? Attempts to answer this question in general have not proven productive (see Borich, Godbout, Peck, et al., 1974) in that any one aporoach may not be more effective than another for every prospective teacher. It is not unlikely that one prospective teacher may profit more from a conventional program and another from some other, more specialized program. Personal traits and training programs may interact thereby suggesting that no one type of training experience may be best for every student. Such trait-program interactions suggest that a prospective teacher should be assigned, when it is feasible, to that training experience that is likely to be most effective for him.

Insert Figure 1 about here

Objectives. The objectives of the present research were (1) to examine the effects of the conventional and personalized approaches to teacher training as they affect teaching behavior and pupil evaluations of teaching and (2) to identify interactions between training approaches on the one hand and the personality and attitudes of the prospective teacher on the other.

Methods. The subjects were 57 elementary school student teachers at The University of Texas at Austin--33 in a personalized training program and 24 in a conventional training program. Both conventional and personalized programs included course work, classroom observation and practice teaching. The unique components of the personalized program were (a) repeated counseling sessions with the prospective teacher for engendering attitudinal and personality characteristics related to effective teaching, (b) the differential assignment of instructional tasks and activities based upon the specific attitudinal and personality characteristics of the prospective teacher, (c) self-observation of teaching behavior through videotaping, and (d) affective feedback and assignment of tasks and activities related to this self-observation.

Personality and attitude scales (Veldman and Parker, 1971; Bown and Richek, 1967) were administered to students in the conventional and personalized programs upon entry into training. The personality measures included extroversion and ideology (idealism) scales while the attitude measures included scales related to attitude toward self, others, reality, work, children and hope. These constructs have been related to effective teaching by Peck (1970). Measures of teaching effectiveness were (1) pupil

evaluations of the prospective teacher's rapport and fosterance of self-esteem and (2) observational measures of the prospective teacher's acceptance of student statements, frequency of teacher-initiated problem solving, frequency of higher level cognitive pupil behavior, frequency of task-oriented pupil-to-pupil interaction and frequency of accepting pupil feelings. Pupil evaluations of the prospective teacher were obtained from an instrument especially designed for elementary school children (Haak, Kleiber, and Peck, 1972). Two direct observational coding systems were used to collect the observational measures of teaching behavior--the Classroom Observation Scales (Emmer and Peck, 1973) and the Instrument for the Analysis of Science Teaching (Hall, 1969). Teaching effectiveness was measured at the end of the practice teaching semester, the last semester in the training sequence.

A trait-treatment interaction design was employed to determine differences between the personalized and conventional programs for different personalities and attitudes. The eight personality and attitude measures served as the trait variables, program (conventional vs. personalized) served as the treatment variable and the measures of teaching effectiveness served as the criterion variables. Trait-treatment interaction methodology differs from traditional factorial designs in that trait variables commonly dichotomized or trichotomized to fit the factorial structure of analysis of variance are not divided into discrete categories but rather are used in their continuous form to describe as many different types of trainees as there are values of a particular trait.

The general methodology may be summarized in three steps. The first step is that of correlating entering personality and attitudinal traits with outcomes for each program. If, for example, the trait-criterion correlation

is positive for one program and negative for a second, the first program is likely to be more effective for individuals scoring high on the trait; the second program, for individuals scoring low on the trait. A second step is to calculate trait-criterion within group regression slopes and the extent to which the regression slopes differ, i.e., are heterogeneous, across programs (Edwards, 1968). Should regression slopes significantly differ, a third step is employed to determine the exact regions of trait values for which the programs are significantly different (Walker and Lev, 1953; Borich, 1971). Figure 2 pictures a hypothetical study for which there are significantly different regression slopes for two programs with regions of significance to the left and right of the point at which regression lines intersect. Students with trait values above point B are assigned to Program I while students who score below point A are assigned to Program II. For students scoring between points A and B, both treatments are equally suitable for producing the criterion behavior and such individuals should be assigned to the least costly program.

Insert Figure 2 about here

Results. Main effect analyses of overall differences between the conventional and personalized programs were performed for each of the six criterion measures. These analyses provided no evidence for overall differences between the two programs. Eight trait-treatment interactions (each involving one of the eight personality and attitude measures) were analyzed for significance with regard to each of the six criterion (teaching effectiveness) variables. Thirteen of these interaction analyses yielded significant findings at the .05 level. These findings are reported in Table 2 which presents (a) the personality or attitudinal trait and

criterion for each of the 13 analyses, (b) the percent of criterion variance accounted for by the interaction of program and trait and (c) the percent of students falling in either the left and/or right region of significance.

Insert Table 2 about here

While all of these tabled findings represented significant trait-treatment interactions, it is the trend across these analyses that was most revealing. For all 13 findings significant at or beyond the .05 level, students who scored below the mean for the combined groups on the various personality and attitude traits profited more from the personalized program than the traditional program and those students who scored above the mean on these traits tended to profit more from the conventional program. These results are consistent with the conceptual basis of the personalized approach to training which suggests that tasks and activities must begin at the student's current level of affective functioning before performance can be improved. For students whose current level of intrapersonal and interpersonal competencies were already above the mean, the personalized program was either less effective or as effective as the traditional program. In many of these instances students already had the prerequisite personality and attitudinal traits deemed necessary for effective teaching and it may be that any training program could only reinforce these traits rather than increase them beyond their present levels.

It is important to note that for 10 of the 13 significant interactions, program differences were sufficiently strong to allow regions of significance to be determined for assigning students on an individual basis to

the program for which they are best suited. While all 13 findings represented significant trait-treatment interactions, four of these analyses were of particular interest in that they included teaching behaviors for which trait-treatment interactions accounted for a substantial percent of variance (12%). The teaching behaviors for which interactions were particularly potent were (1) teacher initiation of problem-solving activity, (2) fosterance of self-esteem and (3) task-oriented pupil-to-pupil interaction.

Implications. Several observations can be made from the interactions between traits and programs found in this study.

(1) The analysis of mean differences between training programs is likely to reveal only gross program effects. Because the thrust of a personalized or similarly specialized program is to provide for individual differences by varying the rate and kind of learning for each student, trait-treatment interaction analyses, not traditional analysis of variance designs, should form the bulwark of an analysis strategy for assessing specialized approaches to training.

(2) When entering levels of personality traits and attitudes are considered, a personalized approach can engender effective teaching behaviors.

(3) A personalized program with the specific components identified in the present paper is likely to be more effective in fostering the individual growth of students who score below average on personality and attitudinal traits related to teaching than students who score above average on these traits.

One methodological outcome which should result from this study is an awareness that factorial designs which attempt in "horse-race" fashion to compare the gross effectiveness of one program with another may mask important interactions between trainees and programs. In place of tests for mean differences between treatments, a methodology sensitive enough to record individual student progress as it relates to entering levels of behavior should be employed. Future training programs of all types and the methodologies by which they are evaluated should take into account individual differences of the nature identified in this study rather than attempt to ameliorate these differences through treatments which in the process of trying to achieve large gains in general performance for all students probably achieve very few such gains for any individual student.

The personalized approach to training as defined in this study has been found particularly effective for students with below average intrapersonal and interpersonal competencies. This finding suggests that similar programs can play a unique role in preparing students for teaching whose attitudes and personalities indicate that they may not be ready for teaching but who otherwise may exhibit traditional skills and aptitudes at least as strong as those of many of our most effective teachers. These individuals may in fact be those who gain most from a training program and who exhibit at program completion strong evidence of effective teaching.

References

Borich, G. D. Interactions among group regressions: Testing homogeneity of group regressions and plotting regions of significance. Educational and Psychological Measurement, 1971, 31, 251-253.

Borich, G. D., Godbout, R. C., Peck, R. F., Kash, M. M., & Poynor, V. L. The Evaluation of Personalized Teacher Training. Final Report to the National Institute of Education. Austin, Texas: Research and Development Center for Teacher Education, The University of Texas at Austin.

Bown, O. H., & Richek, H. G. The Bown Self-Report Inventory (SRI): A quick screening instrument for mental health professionals. Comprehensive Psychiatry, 1967, 8, 45-52.

Edwards, A. L. Experimental design in psychological research. Third edition. New York: Holt, 1968.

Emmer, E. T., & Peck, R. F. Dimensions of classroom behavior. Journal of Educational Psychology, 1973, 64, 223-240.

Fuller, F. F. Concerns of teachers: A development conceptualization. American Educational Research Journal, 1969, 6, 207-226.

Haak, R. A., Kleiber, D., Peck, R. F. Student evaluation of teacher instrument II manual. Austin, Texas: Research and Development Center for Teacher Education, The University of Texas at Austin, 1972.

Hall, G. E. The instrument for the analysis of science teaching: A system for measuring teaching behavior. Austin, Texas: Research and Development Center for Teacher Education, The University of Texas at Austin, 1969.

Peck, R. F. A demonstration program in mental health education for prospective teachers. Project No. MH-6635. The University of Texas at Austin, 1970.

Peck, R. F. Personalized Teacher Education: Basic program plan. Austin, Texas: Research and Development Center for Teacher Education, The University of Texas at Austin, 1972.

Rosenshine, B. Teaching behaviors and student achievement. Windsor, Berkshire, England: National Foundation for Educational Research in England and Wales, 1971.

Veldman, D. J., & Parker, G. V. C. Adjective rating scales for self-description. Multivariate Behavioral Research, 1970, 5, 295-302.

Walker, H., & Lev, J. Statistical inference. New York: Holt, 1953.

TABLE 1

Example Trainee Behaviors in Three Domains of Competence

Intrapersonal	Interpersonal	Content-Related
Personal goal achievement	Awareness of others	Use of teaching resources
Self-confidence	Ability to relate to others	Classroom management
Independence	Responsiveness	Knowledge of subject
Realistic self-perception	Appropriate empathy	Knowledge of child development
Congruence (a match between feeling and behavior)	Receptivity to feedback	Pupil evaluation skills
	Supportive, positive, and encouraging toward pupils	Alternative teaching styles

TABLE 2

Interactions Between Student Traits and the Personalized and Conventional Models of Teacher Training

trait/ criterion	others/ self-esteem	others/ rapport	others/ teacher initiation	reality/ acceptance of students	work/ teacher initiation	ideology/ pupil-pupil interaction	children/ rapport	extroversion/ rapport	self/ rapport	hope/ rapport	hope/ self-esteem	hope/ accept feelings
% σ^2	9.84	7.02	11.90	7.59	11.81	12.25	7.74	8.64	9.45	7.48	12.06	7.65
p for interaction	.02	.05	.01	.03	.01	.01	.04	.03	.02	.04	.01	.04
% cases left region	9	___	14	1	23	17	___	7	5	0	17	2
% cases right region	___*	___	12	7	23	16	___	0	2	0	0	0

*No definable region.

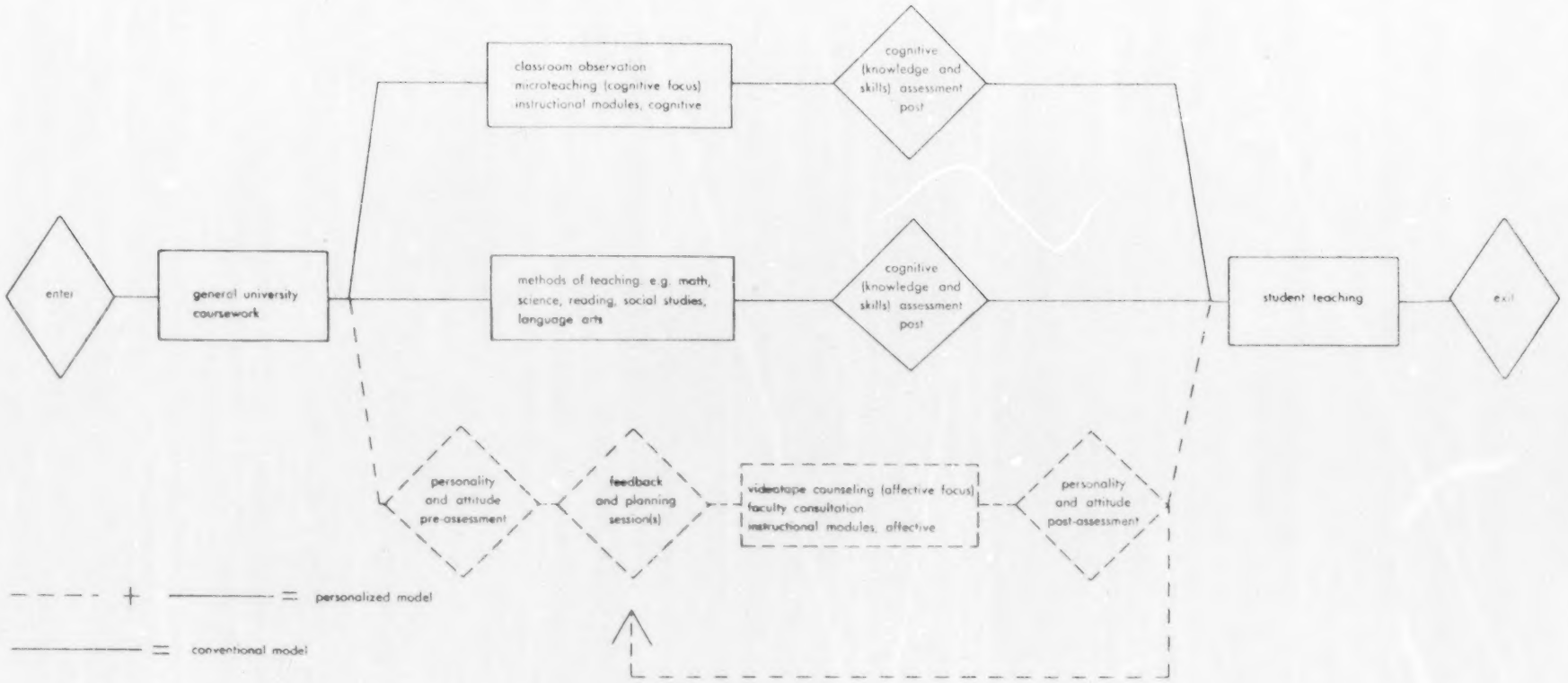
classroom observation
microteaching (cognitive focus)
instructional modules, cognitive
cognitive (knowledge and skills) assessment post
enter
general university coursework
methods of teaching, e.g. math, science, reading, social studies, language arts
cognitive (knowledge and skills) assessment post
student teaching
exit
personality and attitude pre-assessment
feedback and planning session(s)
videotape counseling (affective focus)
faculty consultation
instructional modules, affective
personality and attitude post-assessment
+ = personalized model
= conventional model

Fig 1

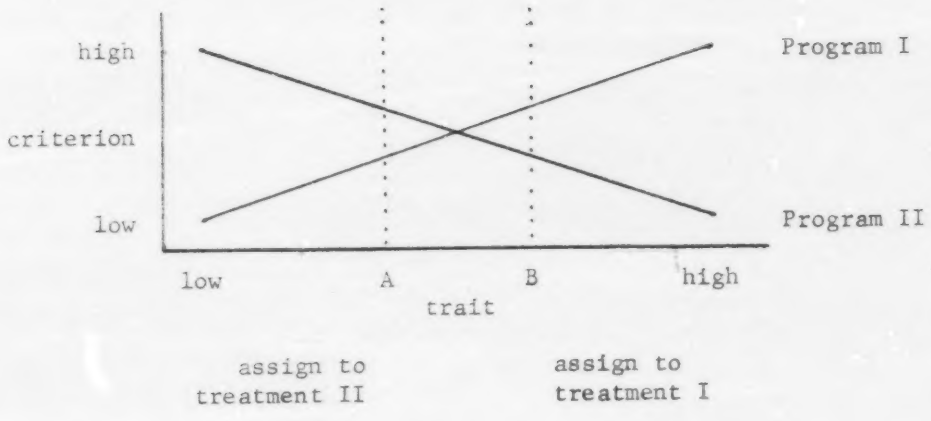
high
criterion
low
Program I
Program II
low
A
B
high
trait
assign to
treatment II
assign to
treatment I

Fig. 2

Figure Captions

Figure 1. Instructional components of the personalized and conventional models of teacher training.

Figure 2. A hypothetical trait-treatment interaction.